

# Setra Local Display

## Model 327

### Installation and Operating Instructions

## 1.0 INSTALLATION

Setra's Model 327 is a small, local display designed for installation in high density modular block gas sticks and panels. It can be used with voltage output and current output transducers using 15 Pin and 9 Pin D-Sub connectors. Consult Table 1, the Configurable Part Number Chart on page 3, to determine the configuration that is supplied. For setting optimum viewing angle, the 327 display housing can rotate 360° degrees. A built-in positive stop limits the rotation of the front portion to a maximum of 360° degrees. If resistance is encountered when trying to rotate in one direction, rotate in the opposite direction.

## 2.0 ELECTRICAL CONNECTIONS

The 327 can be supplied with either a 15 Pin or 9 Pin D-Sub connector to the input transducer and to the power supply. Confirm the electrical connection supplied, and refer to the appropriate column below for proper connections.

### 2.1 Voltage Units

	9 PIN D-SUB PIN	15 PIN D-SUB PIN
CONNECTION		
+ EXCITATION	4	7
+ OUTPUT	1	2
- OUTPUT	8	12
- EXCITATION	9	5
CASE GND	SHELL	SHELL

*Reverse Polarity Protected.*

### 2.2 Current Units

	9 PIN D-SUB PIN	15 PIN D-SUB PIN
CONNECTION		
+ EXCITATION	4	7
- EXCITATION	9	5
CASE GND	SHELL	SHELL

*Reverse Polarity Protected, when used with a Setra transducer.*

## 2.3 EMC Certification

This product complies with EN61326 Electrical Equipment for Measurement, Control and Laboratory use – EMC Requirements for Minimum Requirements and Industrial Locations. Special caution should be taken to meet Standard EN61000-4-5: 1995 Surge Immunity if any of the following conditions apply to the installation: The product is installed outside; all or any part of the cable is exposed to the outside; the cable is greater than 30 meters in length. In order to meet the Surge Immunity requirements, the following conditions must be followed during installation:

1. Shielded cable must be used, and the shield must be tied to earth ground (not power supply ground) on at least one end of the cable shield/drain wire. The shield must be maintained all the way from sensor to the power supply.
2. If unshielded cable is used, an earth grounded metal conduit fitting can be used to replace the shielded cable.
3. For a sensor with a metal body or enclosure, the body/enclosure must be grounded to earth. If a protective metal housing is used, the metal housing should be grounded to earth
4. If a protective plastic housing is used, the housing must be able to withstand at least 2 KV from the housing to earth ground, without damaging the circuit.

## 3.0 CALIBRATION

The 327 is factory calibrated to display engineering units. The multi-turn pots on the front face are for zero and span display adjustment. Setra recommends that the zero adjustment be done using the transducer zero potentiometer, whenever possible. The display zero potentiometer should only be used for minor adjustments. Never adjust the span potentiometer unless proper calibration equipment is used and proper calibration procedures are followed.

### 3.1 Zero & Span Adjustment

The zero and span potentiometers are located on the front of the unit just under the digital display.

1. Apply zero pressure to the transducer and adjust the 327's zero potentiometer if the 327 does not display "0".  
Note: For a compound range (e.g., -14.7 to 100 psig) apply "0" psig pressure to the transducer and adjust the 327 zero potentiometer until the display is "0". Do not apply -14.7 psig and attempt to adjust the display to "-14.7".
2. Apply full scale output to the transducer and adjust the span potentiometer on the 327, if the 327 does not display the correct value. Repeat steps 1 and 2 as necessary.

### 3.2 Decimal Points

The 327 decimal point is factory set to the specified range. It is not adjustable in the field.

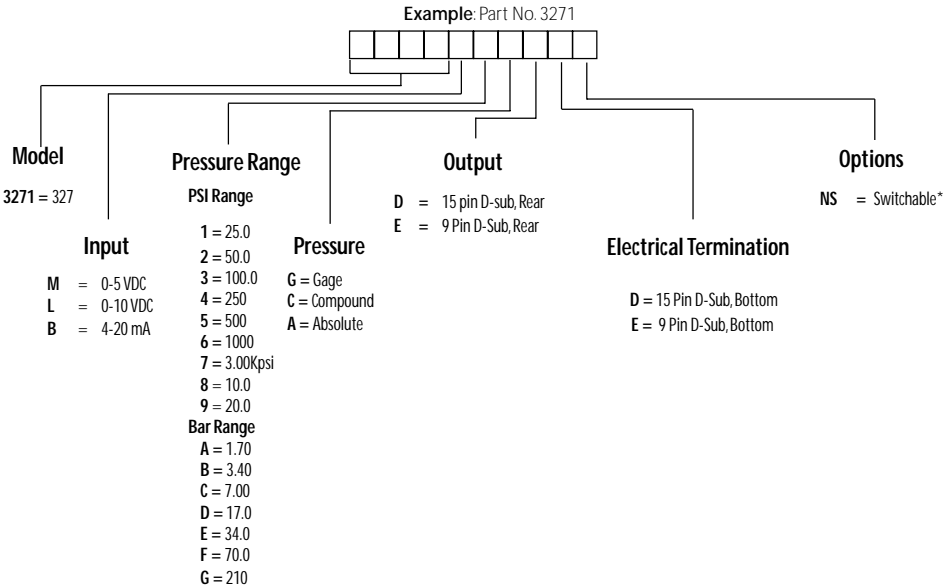
### 3.3 Backlighting

The 327 is supplied with yellow backlighting as standard. The backlighting cannot be disabled in the field.

# 4.0 SPECIFICATIONS

Display	Voltage Input Display	Loop Powered Display
Digits	-999 to 1999	-999 to 1999
Type	7 Segment LCD, Yellow Backlight	7 Segment LCD, Yellow Backlight
Polarity	Automatic (-) display	Automatic (-) display
Overload	1 followed by blank display	1 followed by blank display
Accuracy	0.25% of reading $\pm$ 1count	0.25% of reading $\pm$ 1 count
Environmental		
Operating Temp.	+32°F to +140°F (0C to +60C)	+32°F to +140°F (0C to +60C)
Storage Temp.	-40°F to +158°F (-20C to +70C)	-40°F to +158°F (-20C to +70C)
Temp. Coeff.	200 ppm/C	200 ppm/C
Electrical Data		
Input Signal	0 to 5 VDC, 0 to 10 VDC	4-20 mA loop powered
Excitation	12 VDC to 30 VDC 300k ohm min input impedance < 30 mA current consumption	4.75 VDC max voltage drop
Zero/Span Adjust Protection	Multi-Turn Potentiometers Reverse polarity protection	Multi-Turn Potentiometers 100 mA current limit

## TABLE 1 CONFIGURABLE PART NUMBER



\* Note: Option NS Switchable version is not available in all configurations. Consult factory.

## 5.0 RETURNING PRODUCTS FOR REPAIR

Please contact a Setra application engineer (800-257-3872, 978-263-1400) before returning unit for repair to review information relative to your application. Many times only minor field adjustments may be necessary. When returning a product to Setra, the material should be carefully packaged and shipped prepaid to:

Setra Systems, Inc.  
159 Swanson Road  
Boxborough, MA 01719-1304  
Attn: Repair Department

To assure prompt handling, please supply the following information and include it inside the package or returned material:

1. Name and phone number of person to contact.
2. Shipping and billing instructions.
3. Full description of the malfunction.
4. Identify any hazardous material used with product.

Notes: Please remove any pressure fittings and plumbing that you have installed and enclose any required mating electrical connectors and wiring diagrams.

Allow approximately 3 weeks after receipt at Setra for the repair and return of the unit.

Non-warranty repairs will not be made without customer approval and a purchase order to cover repair charges.

### Calibration Services

Setra maintains a complete calibration facility that is traceable to the National Institute of Standards & Technology (NIST). If you would like to recalibrate or recertify your Setra pressure transducers, please call our Repair Department at 800-257-3872 (978-263-1400) for scheduling.

## 6.0 WARRANTY AND LIMITATION OF LIABILITY

SETRA warrants its products to be free from defects in materials and workmanship, subject to the following terms and conditions: Without charge, SETRA will repair or replace products found to be defective in materials or workmanship within the warranty period; provided that:

- a) the product has not been subjected to abuse, neglect, accident, incorrect wiring not our own, improper installation or servicing, or use in violation of instructions furnished by SETRA;
- b) the product has not been repaired or altered by anyone except SETRA or its authorized service agencies;
- c) the serial number or date code has not been removed, defaced, or otherwise changed; and
- d) examination discloses, in the judgment of SETRA, the defect in materials or workmanship developed under normal installation, use and service;
- e) SETRA is notified in advance of and the product is returned to SETRA transportation prepaid.

Unless otherwise specified in a manual or warranty card, or agreed to in writing and signed by a SETRA officer, SETRA pressure and acceleration products shall be warranted for one year from date of sale.

The foregoing warranty is in lieu of all warranties, express, implied or statutory, including but not limited to, any implied warranty of merchantability for a particular purpose.

SETRA's liability for breach of warranty is limited to repair or replacement, or if the goods cannot be repaired or replaced, to a refund of the purchase price. SETRA's liability for all other breaches is limited to a refund of the purchase price. In no instance shall SETRA be liable for incidental or consequential damages arising from a breach of warranty, or from the use or installation of its products.



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